ABSTRACT

An integrated circuit (IC) module allows volatile data generated by applications to be stored within volatile data files in the volatile memory. A file system tracks the location of all data files as residing in either volatile memory or nonvolatile memory and facilitates access to the volatile data files in volatile memory in a similar manner to accessing nonvolatile data files in nonvolatile memory. The file system exposes a set of application program interfaces (APIs) to allow applications to access the data files. The same APIs are used to access both volatile data files and nonvolatile data files. When an application requests access to a data file, the file system initially determines whether the application is authorized to gain access to the data file. If it is, the file system next determines whether the data file resides in volatile memory or nonvolatile memory. Once the memory region is identified, the file system identifies the physical location of the data file.